

4.0 TRAFFIC AND TRANSPORTATION

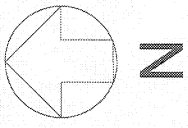
4.1 Existing Conditions

The study area is bounded by Metropolitan Avenue to the north, Myrtle Avenue to the south, Traffic Avenue and 65th Street to the east and a line parallel to Forest Avenue connecting Flushing and Metropolitan Avenues in the north to Myrtle and Irving Avenues to the south. The street system has a grid like structure with two separate grids. The east half and the west half coming together at Forest Avenue. The two are differently oriented and this creates irregular intersection along the Forest Avenue interface.

Street System

The street network provides adequate vehicular access to the study area. Although there is no direct connection to any major highway, the study area is within a half mile of the LIE and the BQE. The main arterials in the study area are Metropolitan Avenue, Myrtle Avenue, Forest Avenue, and Fresh Pond Road. Myrtle Avenue and Metropolitan Avenue are the east/west corridors in the south and north of the study area in which Metropolitan Avenue serve as a truck route and connects to the Brooklyn Queens Expressway (I-278) in Brooklyn in the west. It also provides connection to Union Turnpike/Jackie Robinson Parkway in the east. Myrtle Avenue in the south of the study area also connects to Union Turnpike/Jackie Robison Parkway further east. Metropolitan Avenue and Myrtle Avenue are truly mixed use in character, there are commercial, residential and major entertainment centers (e.g. Ridgewood Theater) located along these corridors. Two other major corridors are Fresh Pond Road and Forest Avenue that are in the north/south direction. See Figure 4-1:

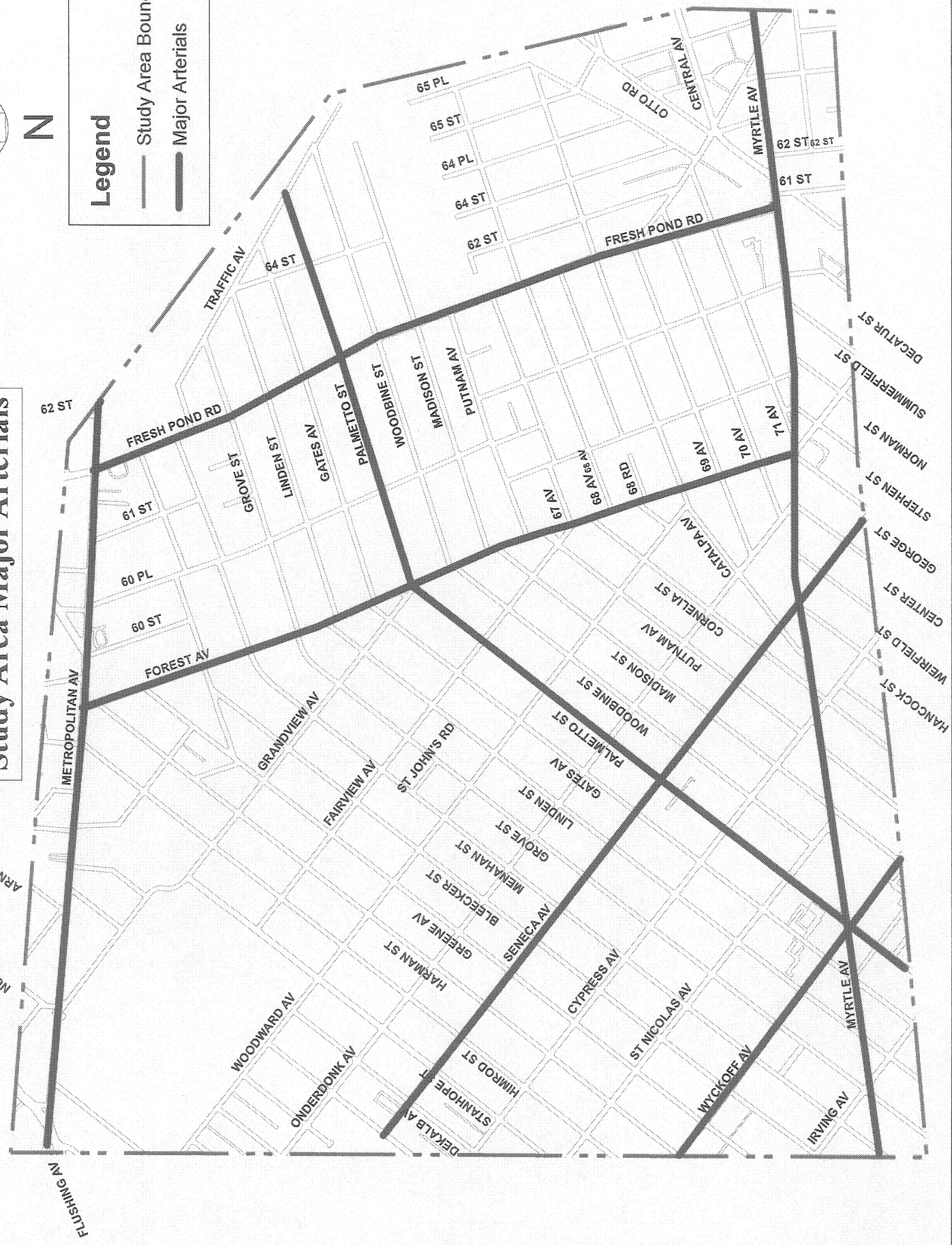
Fresh Pond Road is a main north/south corridor in the east half of the study area. Fresh Pond Road comprises of one moving lane and one parking lane in each direction. There is a mixture land uses, such as residential, commercial, and offices (medical and dental service) located along the corridor. The street is approximately 45 feet wide from Metropolitan Avenue to Myrtle Avenue.



Legend

- Study Area Boundary
- Major Arterials

Figure 4-1
Study Area Major Arterials



Forest Avenue is another major north/south corridor parallel to Fresh Pond Road in the center of the study area. It comprises of one moving lane and one parking lane in each direction. The street which is approximately 35 feet wide has a mixture of residential, commercial, and institutional uses located along its length.

Seneca Avenue is a two way east-west corridor with one lane and a parking lane in each direction. The street is approximately 40 feet wide from DeKalb Avenue to Myrtle Avenue. The land use along this corridor includes residential, commercial/retail, institutional, and funereal homes uses.

Palmetto Street is a two way east-west corridor with one lane and a parking lane in each direction. It is partially underneath the MTA elevated subway track – the “M” line between Myrtle Avenue and Onderdonk Avenue. The street is approximately 40 feet wide. There is a mixture of residential and commercial uses as well as a MTA bus depot located along this corridor.

Wyckoff Avenue is a two way east-west corridor with one lane and a parking lane in each direction. The street is approximately 30 feet wide with a mixture of residential, commercial, and offices such as medical and dental located along this corridor.

4.2 Activity Centers & the Transportation Network

A high percentage of the peak hour vehicle trips in the study area are through trips for work and shopping oriented. The trips leaving the area in the AM are home based trips (origins) while those coming into the area constitute a high share of non-home based trips (destinations). The reverse pattern is somewhat evident in the PM peak. The area’s economic activity, local retail/offices and entertainment centers make this area a destination point. The two major transit hubs and the surrounding commercial retail create major Activity Centers in the study area, see Figure 4-2.

Activity Center # 1 is driven by a major transit hub which connect two subway lines (M and L) and the MTA bus depot/terminal at Palmetto Street/Myrtle Avenue and Wyckoff Avenue. Because of the bus depot most of the bus lines (B54, Q55, Q58, B13, B54, and B26) either start, end or pass through this section during its route. This portion of the Myrtle corridor is predominantly commercial in nature with major retail activities; food shopping centers such us the Food Bazaar

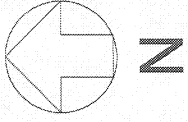
and Dimensions' supermarket. There are also shoes and clothing stores, restaurants (K and K Super Buffet), fast food national chains, pharmacies (Duane Reade) and banking service (North Fork Bank). The area is easily accessible by automobile as well.

Activity Center # 2: is concentrated along Metropolitan Avenue between Flushing Avenue and Forest Avenue, but takes also a portion of the area south of Metropolitan Avenue bounded with Grandview and Forest Avenue. This area contains a mixture of commercial and retail businesses such as auto sales and auto body shops, fast food chain stores, pharmacies and several banks such as Citibank and Chase located on the western section along Metropolitan Avenue. There are also two schools located in this area, (PS 71 on 62-85 Forest Avenue and the Grover Cleveland High School on 21-27 Himrod Street). Two transit bus lines run along Metropolitan Avenue (B38 and Q54).

Activity Center # 3: is the Fresh Pond Road Corridor between Metropolitan Avenue and Catalpa Avenue. This section of the corridor contains the second major transit hub in the study area with the MTA bus depot between 68 Avenue and Madison Street, and The "M" train subway station next to it. This connection ensures a constant flow of commuters and pedestrians who use the surrounding services. This section is predominately commercial with retail activity on the ground floor, such as pharmacies, grocery stores, supermarkets, banking and medical offices. This area contains also PS 88. It has one public bus line (Q58) running between Metropolitan Avenue and Putnam Avenue, and two public bus lines (B13 and B20) running between Putnam Avenue and Myrtle Avenue that serve this activity center.

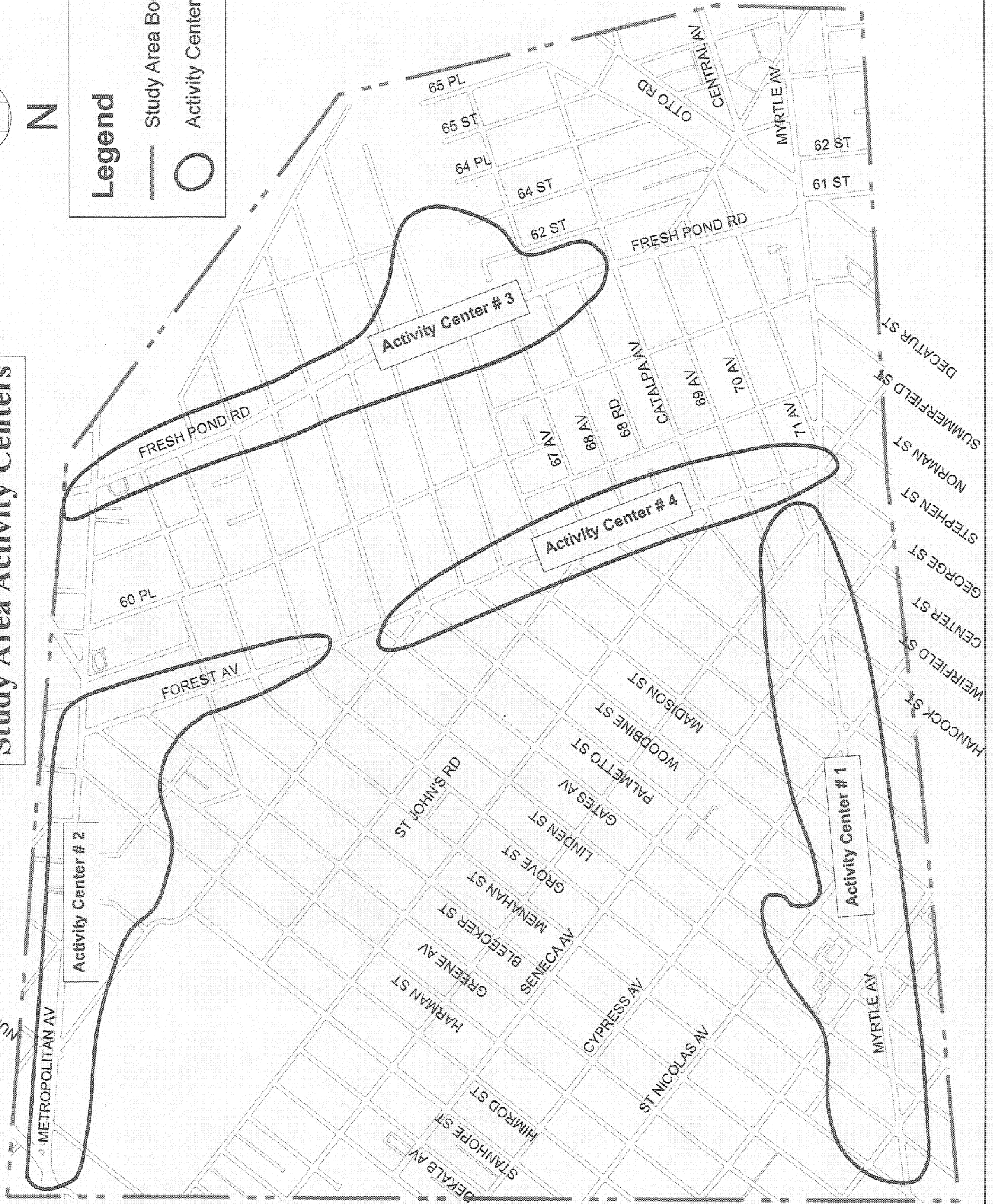
Activity Center # 4: is located on Forest Avenue between Gates and Myrtle Avenue. It is served by three public bus lines (B13, Q39, and Q58), and the subway line "M" which stop at Forest Avenue station. The area contains shopping retail stores such as the Metro Discount Center, delis, supermarkets, and other services such as banking, and medical offices. PS 93 and the Queens Library Ridgewood are also located on this area. Like the rest of the study area activity center 4 is easily accessible by automobile.

Figure 4-2
Study Area Activity Centers



Legend

- Study Area Boundary
- Activity Centers



4.3 Data Collection & Traffic Operations

Data Collection

Existing traffic conditions were defined through field surveys conducted for one week in November 2004. Automatic Traffic Recorders (ATR) provided traffic count data from Monday November 15, 2004 to Sunday November 21, 2004. This was supplemented with information from recent environmental documents and other studies conducted for projects in the study area.

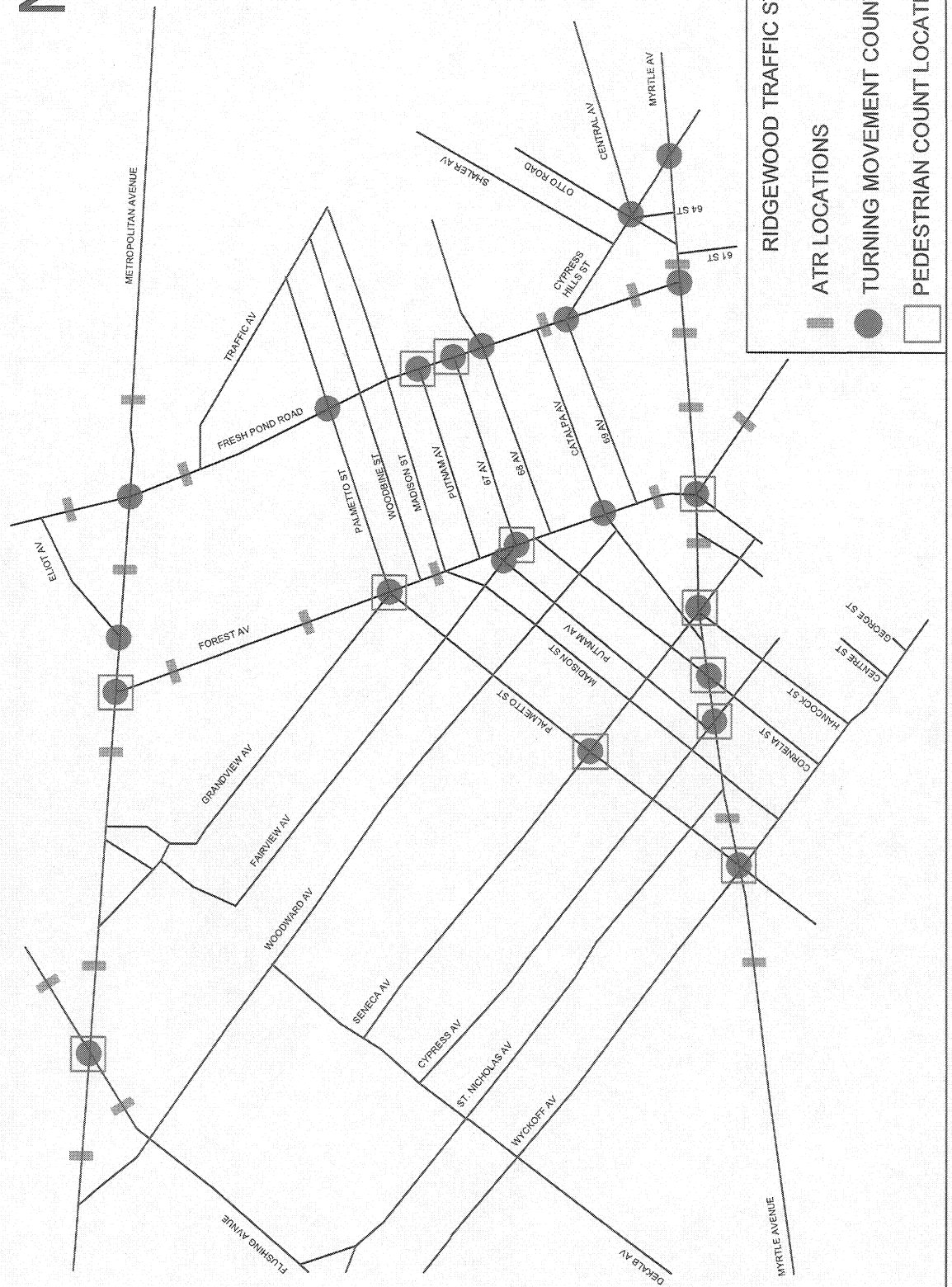
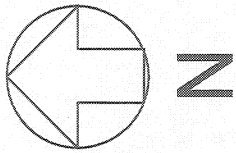
Traffic volume counts included vehicle classification and turning movements for three midweek days (Tuesday, Wednesday, and Thursday) during the AM, midday, and PM peak hours and for the Saturday Midday peak hour. The ATR machines were placed at twenty-two locations for the duration of seven days. See Figure 4-3 for the traffic count locations in the study area. Speed and delay runs were also conducted for the various peak hours along the main corridors.

Automatic Traffic Recorders (ATR) were placed at the following twenty-two locations:

- Myrtle Avenue between St Nicholas Street and Wyckoff Avenue (Westbound)
- Myrtle Avenue between Gates Avenue and Wyckoff Avenue (Eastbound)
- Myrtle Avenue between Onderdonk Avenue and Forest Avenue (Eastbound)
- Myrtle Avenue between Forest Avenue and 71st Avenue (Westbound)
- Forest Avenue between Stephen Street and George Street (Northbound)
- Forest Avenue between 70th Avenue and Myrtle Avenue (Southbound)
- Myrtle Avenue between 60th Lane and Fresh Pond Road (Eastbound)
- Myrtle Avenue between Otto Road and Fresh Pond Road (Westbound)
- Fresh Pond Road between 70th Avenue and 69th Avenue (Northbound)
- Fresh Pond Road between Catalpa Avenue and 69th Avenue (Southbound)
- Fresh Pond Road between Bleecker Street and Metropolitan Avenue (Northbound)
- Fresh Pond Road between 62nd Road and Metropolitan Avenue (Southbound)
- Metropolitan Avenue between 61st Street and Fresh Pond Road (Eastbound)
- Metropolitan Avenue between 62nd Street and Fresh Pond Road (Westbound)
- Metropolitan Avenue between Starr Street and Flushing Avenue (Westbound)
- Metropolitan Avenue between Woodward Avenue and Flushing Avenue (Eastbound)

- Flushing Avenue between 53rd Street and Metropolitan Avenue (Southbound)
- Flushing Avenue between Woodward Avenue and Metropolitan Avenue (Northbound)
- Forest Avenue between Woodbine Street and Palmetto Street (Northbound)
- Forest Avenue between Gates Avenue and Palmetto Street (Southbound)
- Forest Avenue between Harman Street and Metropolitan Avenue (Northbound)
- Metropolitan Avenue west of Forest Avenue (Eastbound)

Figure 4-3 Traffic Count Locations



Vehicle classification and turning movement counts were conducted for the various peak periods at the following 22 signalized location:

Signalized intersections:

1. Metropolitan Avenue @ Flushing Avenue
2. Metropolitan Avenue @ Eliot Avenue
3. Metropolitan Avenue @ Forest Avenue
4. Metropolitan Avenue @ Fresh Pond Road
5. Myrtle Avenue @ Wyckoff Avenue/Palmetto Street
6. Myrtle Avenue @ Cypress Avenue
7. Myrtle Avenue @ Cornelia Street
8. Myrtle Avenue @ Seneca Avenue/Hancock Street
9. Myrtle Avenue @ Forest Avenue/George Street
10. Myrtle Avenue @ Fresh Pond Road
11. Myrtle Avenue @ Cypress Hills Street
12. Cypress Hill Street @ Central Avenue
13. Fresh Pond Road @ Palmetto Street
14. Fresh Pond Road @ Putnam Avenue
15. Fresh Pond Road @ 67th Avenue
16. Fresh Pond Road @ 68th Avenue
17. Fresh Pond Road @ Cypress Hill Street/69th Avenue
18. Forest Avenue @ Palmetto Street/Grandview Avenue
19. Putnam Avenue @ Fairview Avenue
20. Forest Avenue @ 67th Avenue/Fairview Avenue
21. Forest Avenue @ Catalpa Avenue
22. Seneca Avenue @ Palmetto Street

Pedestrian Data

Pedestrian traffic plays a significant role in the study area due to the presence of the transit hubs, commercial retails, recreational facilities, schools, and churches. Fourteen intersections were identified for pedestrian counts for the weekday (AM, MD, and PM) and Saturday peak hour.

1. Myrtle Avenue @ Wyckoff Avenue/Palmetto Street
2. Metropolitan Avenue @ Forest Avenue
3. Forest Avenue @ 67th Avenue
4. Forest Avenue @ Palmetto Street/Grandview Avenue
5. Fresh Pond Road @ Putnam Avenue
6. Fresh Pond Road @ 67th Avenue
7. Metropolitan Avenue @ Flushing Avenue
8. Myrtle Avenue @ Seneca Avenue
9. Seneca Avenue @ Palmetto Street
10. Myrtle Avenue @ Fresh Pond Road
11. Myrtle Avenue @ Cypress Avenue
12. Myrtle Avenue @ Cornelia Street
13. Myrtle Avenue @ Forest Avenue
14. Metropolitan Avenue @ Fresh Pond Road

Parking Data

Parking data was collected in detail for the following facilities:

- Off street parking garages
- Off street parking lots
- On-street metered parking
- On-street non-meter parking

Accident Data

Accident data for nine intersections for the years 1998-2000 from NYSDOT and DMV records was analyzed to identify patterns in the study area. The accidents locations are the following:

- Metropolitan Avenue @ Fresh Pond Road
- Metropolitan Avenue @ Flushing Avenue
- Fresh Pond Road @ Cypress Hills Street
- Metropolitan Avenue @ Forest Avenue
- Myrtle Avenue @ Cypress Avenue
- Metropolitan Avenue @ Eliot Avenue
- Myrtle Avenue @ Seneca Avenue
- Myrtle Avenue @ George Street
- Myrtle Avenue @ Fresh Pond Road

4.4 Network Traffic Volumes

Balanced traffic network volumes for the various peak periods were prepared using the ATRs and the manual turning movement counts. This information was plotted on traffic flow maps for each of the representative peak hours; AM (7:45 - 8:45), midday (11:45am - 12:45pm), PM (5:15 - 6:15), and Saturday midday (12:00 - 1:00). Figures 4-4, 4-5, 4-6, and 4-7 present the 2004 existing peak hour traffic volumes.

The data showed that two locations along the Metropolitan Avenue corridor processed the highest number of vehicles for all four peak periods.

1. Westbound Metropolitan Avenue between 62nd Street and Fresh Pond Road processed approximately 1052, 654, 757, and 808 vehicles per hour (vph) in the AM, midday, PM, and Saturday midday peak hours, respectively; and

2. Eastbound Metropolitan Avenue between Woodward Avenue and Flushing Avenue processed approximately 1208, 769, 749, and 864 vehicles per hour (vph) in the AM, midday, PM, and Saturday midday peak hours.

Table 4-1 shows vehicles per hour (vph) for the AM, midday, PM, and Saturday midday peak hours, respectively at all ATR count locations.

**Table 4-1
Peak Hour ATR Volumes**

Location ID	Location	Peak Hour Volumes			
		AM	MD	PM	SAT MD
1	Myrtle Ave between St Nicholas St & Wyckoff Ave (westbound)	332	233	253	295
2	Myrtle Ave between Gates Ave & Wyckoff Ave (eastbound)	281	337	427	393
3	Myrtle Ave between Onderdonk Ave & Forest Ave (eastbound)	480	454	621	601
4	Myrtle Ave between Forest Ave & 71st Ave (westbound)	507	332	357	402
5	Forest Ave between Stephen St & George St (northbound)	378	196	259	325
6	Forest Ave between 70th Ave & 69th Ave (southbound)	273	220	365	403
7	Myrtle Ave between 60th La & Fresh Pond Rd (eastbound)	507	332	357	402
8	Myrtle Ave between Otto Rd & Fresh Pond Rd (westbound)	546	260	310	541
9	Fresh Pond Rd between 70th Ave & 69th Ave (northbound)	217	187	189	224
10	Fresh Pond Rd between Catalpa Ave & 69th Ave (southbound)	539	383	549	466
11	Fresh Pond Rd between Bleecker St & Metropolitan Ave (northbound)	731	513	611	641
12	Fresh Pond Rd between 62nd Rd & Metropolitan Ave (southbound)	561	542	762	635
13	Metropolitan Ave between 61st St & Fresh Pond Rd (eastbound)	427	486	749	603
14	Metropolitan Ave between 62nd St & Fresh Pond Rd (westbound)	1052	654	757	808
15	Metropolitan Ave between Starr St & Flushing Ave (westbound)	338	399	815	500
16	Metropolitan Ave between Woodward Ave & Flushing Ave (eastbound)	1208	769	749	864
17	Flushing Ave between 53rd St & Metropolitan Ave (southbound)	699	535	572	485
18	Flushing Ave between Woodward Ave & Metropolitan Ave (northbound)	294	355	444	281
19	Forest Ave between Woodbine St & Palmetto St (northbound)	309	190	258	245
20	Forest Ave between Gates Ave & Palmetto St (southbound)	436	335	544	473
21	Forest Ave between Harman St & Metropolitan Ave (northbound)	279	266	325	371
22	Metropolitan Ave west of Forest Ave (eastbound)	634	600	1122	734

Figure 4-4 Existing AM Peak Hour Volume (7:45 - 8:45 am)

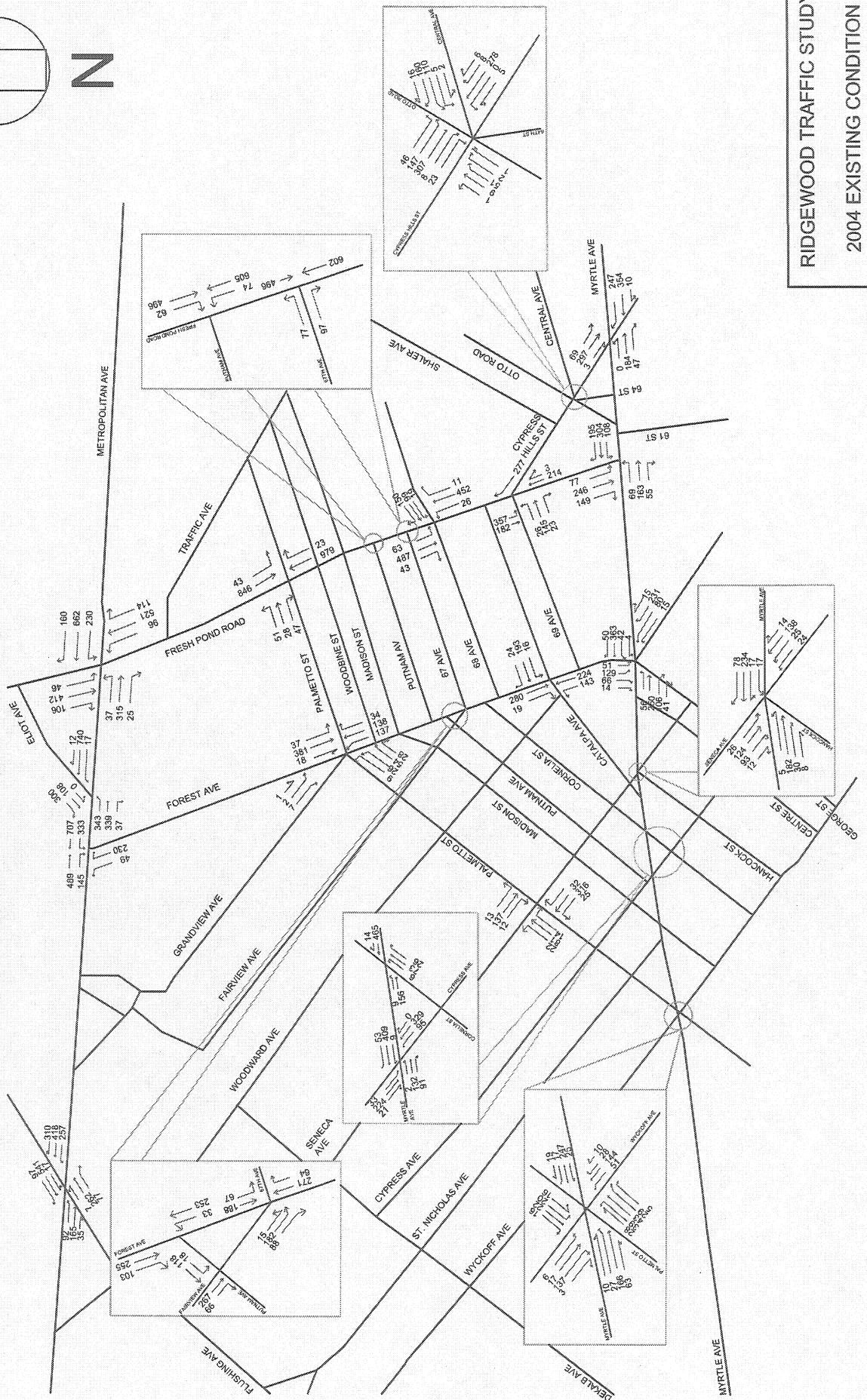
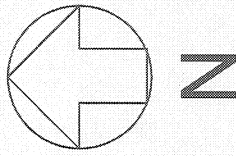


Figure 4-5
Existing MD Peak Hour Volume
(11:45am - 12:45 pm)

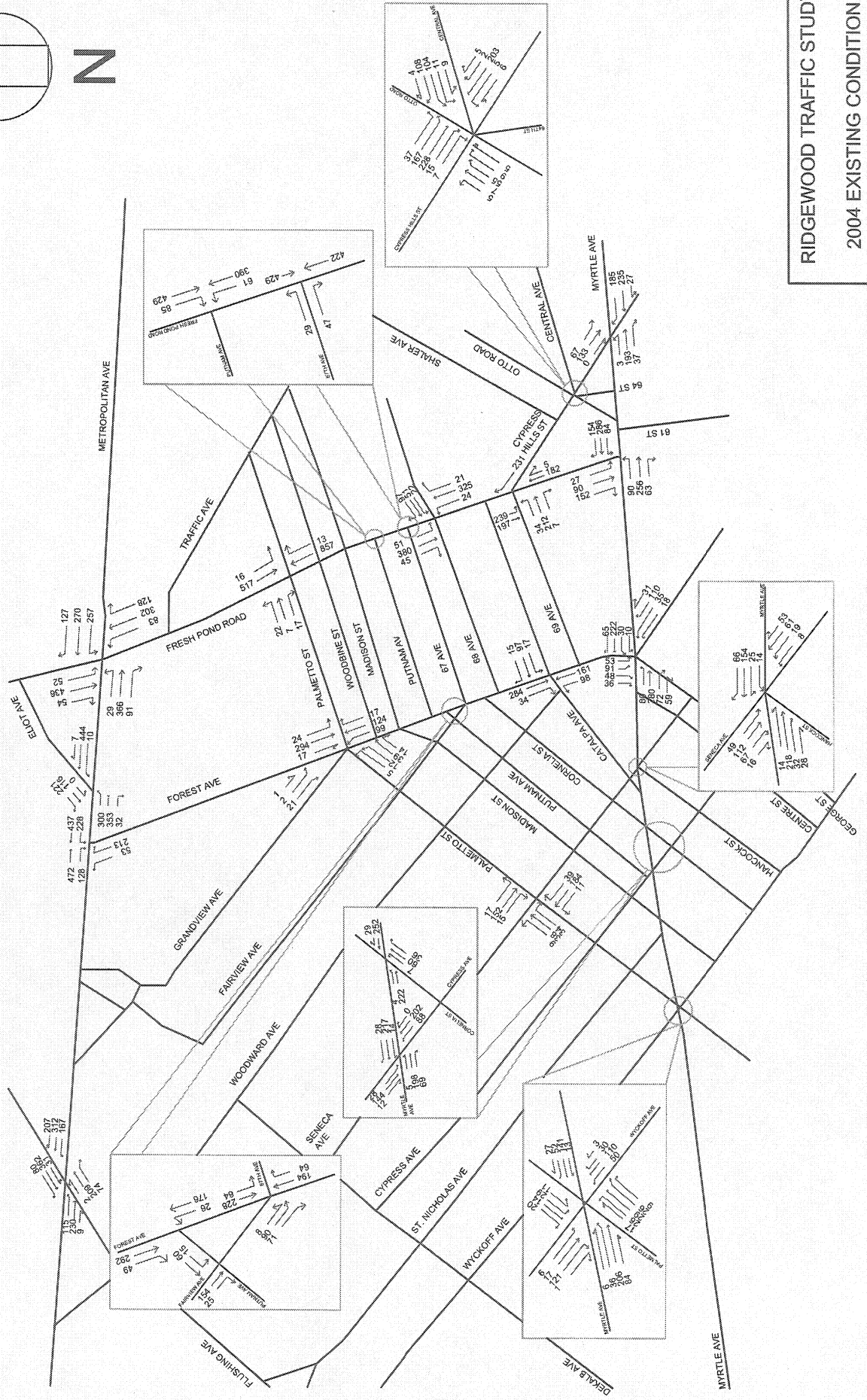
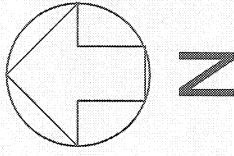


Figure 4-6 Existing PM Peak Hour Volume (5:15 - 6:15 pm)

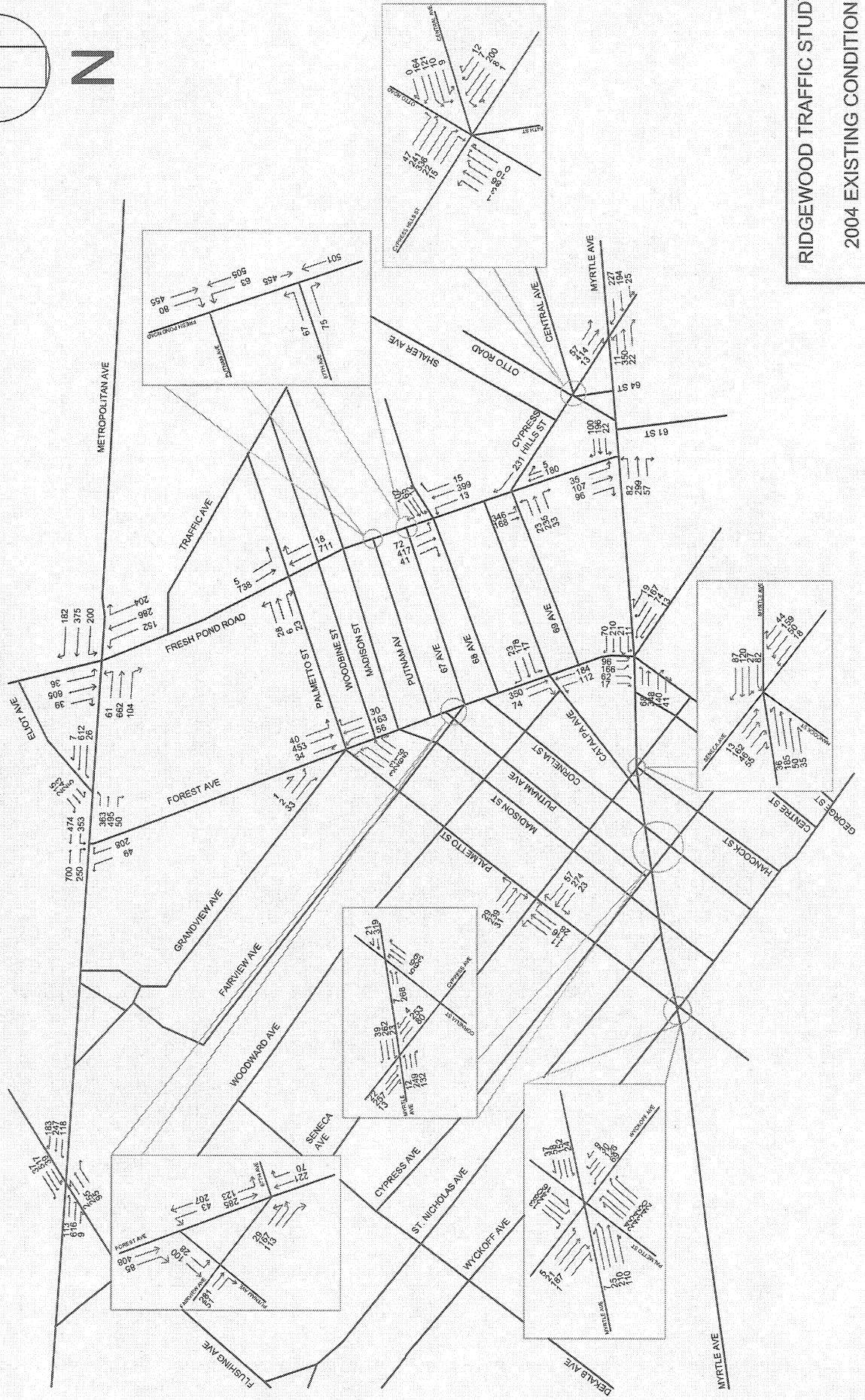
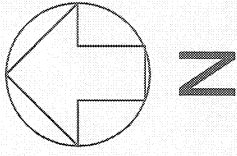
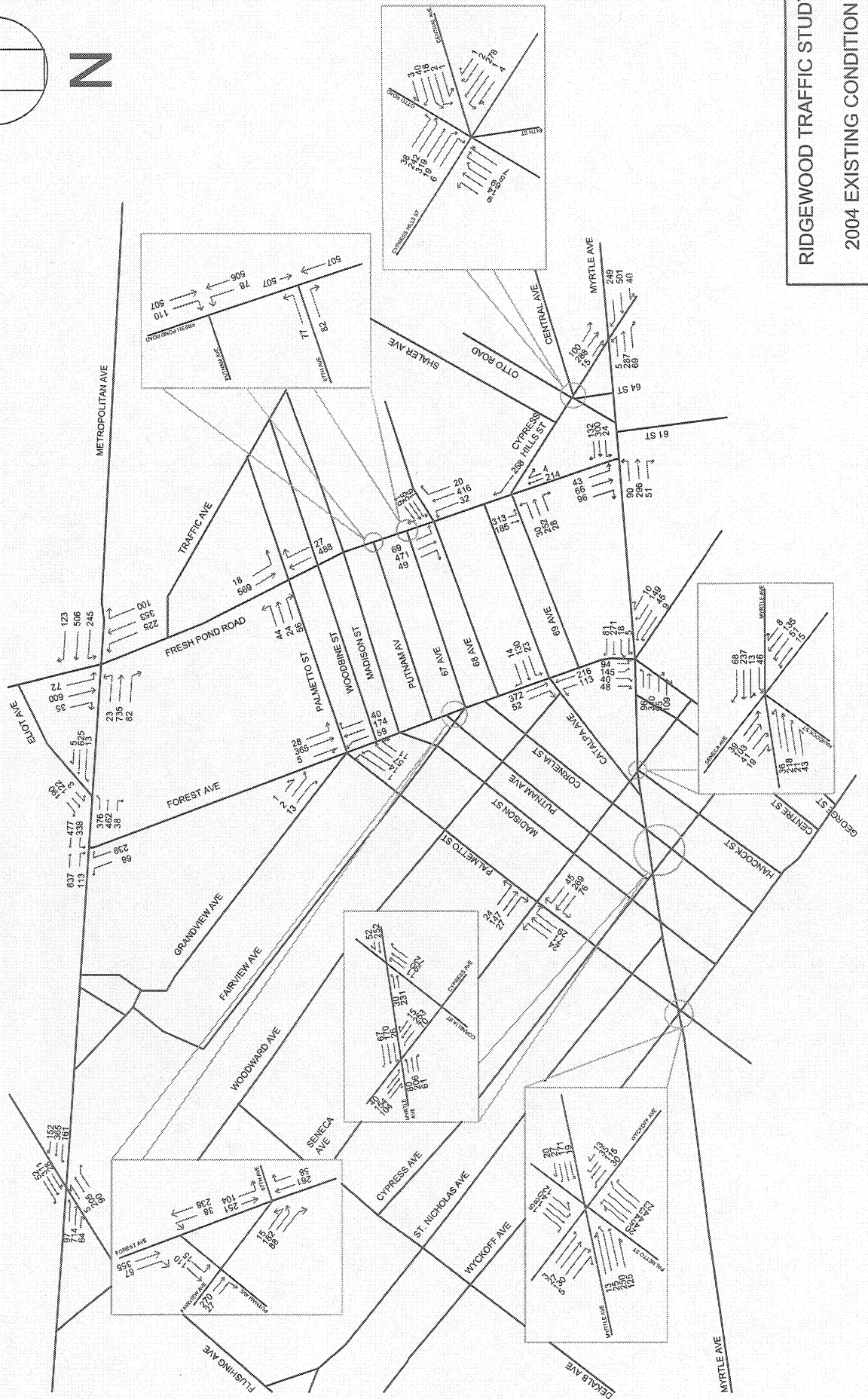
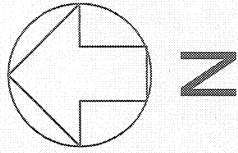


Figure 4-7
Existing Saturday MD Peak Hour Volume
(12:00 - 1:00 pm)



RIDGEWOOD TRAFFIC STUDY
2004 EXISTING CONDITION

4.5 Street Capacity & Level of Service (LOS)

The capacity of the roadways is the maximum rate of flow which may pass through a section of roadway under prevailing traffic, roadway and signalization conditions. The capacity of a roadway is determined by several factors including turning movements, signal timing, geometric design of the intersection, pedestrian movements, type of vehicle, illegal and/or double parking, grade, roadway conditions, and weather. In determining street capacity within the study area, the 2000 Highway Capacity Manual methodology was used. The methodology requires the use of official signal timings, street geometry, and other relevant information for performing capacity and LOS analyses. Field inventories were conducted in order to gather the prevailing conditions of the intersection.

The traffic flow characteristics are measured in terms of the volume-to-capacity (v/c) ratios and delays. The quality of the flow is expressed in terms of LOS, which is based on an average delay experienced by a vehicle. When the v/c ratio exceeds 1.0, a facility or intersection operates at or over capacity. In this situation severe congestion occurs in traffic with stop-and-start conditions, and extensive vehicle queuing and delays. Volume-to-capacity ratios of less than 0.85 are considered to be reflective of acceptable traffic conditions, with average delays of 45 seconds or less. The following are level of service criteria as specified in the 2000 HCM Methodology.

SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

Level of Service	Control Delay Per Vehicle	Description of Traffic Condition
A	≤ 10.0	LOS A describes operations with low control delay, up to 10 s/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all.
B	>10 to 20	LOS B describes operations with control delay greater than 10 and up to 20 s/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
C	> 20 to 35	LOS C describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths or both. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	> 35 to 55	LOS D describes operations with control delay greater than 35 and up to 55 s/veh. The influence of congestion becomes more noticeable at this level. Longer delays may result from a combination of unfavorable progression, long cycle lengths, and/or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55 to 80	LOS E describes operations with control delay greater than 55 and up to 80 s/veh. These higher delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.
F	> 80	LOS F describes operations with delay in excess of 80 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Sources: Highway Capacity Manual, Transportation Research Board;
National Research Council, Washington D.C., 2000;
New York City Department of Transportation;
New York State Department of Transportation.

Note: Control delay is measured in terms of seconds per vehicle.

4.6 Existing Traffic Conditions

Intersections with significant activity and volumes were identified and analyzed for roadway capacity using the 2000 Highway Capacity Manual (HCM) methodology. Balanced traffic network for the weekday AM, Midday, PM, peak hours and Saturday Midday peak hour were developed and volume-to-capacity (v/c) ratios, vehicular delay, and level-of-service (LOS) were determined. Table 4-2 shows the 2004 Existing Conditions, v/c ratios, delays, and level of service (LOS) for AM, midday, PM, and Saturday midday peak hours for the 22 signalized intersections analyzed in the study area.

The analysis shows that most intersections operated at an acceptable level of service (LOS) C or better during the AM, midday, PM, and Saturday midday peak hours. However, some intersections experienced LOS D, E, and F for some or all lane groups during some peak hours. Figures 4-8, 4-9, 4-10, and 4-11 show the overall LOS for all analyzed intersections in the study area.

The intersections with approaches or lane groups with mid LOS D (equal to 45 sec/veh) or worse are listed below and shown in Figures 4-12, 4-13, 4-14, and 4-15.

- Metropolitan Avenue & Flushing Avenue
- Metropolitan Avenue & Eliot Avenue
- Metropolitan Avenue & Forest Avenue
- Metropolitan Avenue & Fresh Pond Road
- Myrtle Avenue & Wyckoff Avenue/Palmetto Street
- Myrtle Avenue & Cypress Avenue
- Myrtle Avenue & Seneca Avenue/Hancock Street
- Myrtle Avenue & Forest Avenue/George Street
- Myrtle Avenue & Cypress Hills Street
- Cypress Hills Street & Central Avenue
- Fresh Pond Road & Palmetto Street
- Fresh Pond Road & 67th Avenue
- Fresh Pond Road @ Cypress Hills Street/69th Avenue
- Forest Avenue & Palmetto Street/Grandview Avenue

TABLE 4-2 (Page 1 of 3)
TRAFFIC CAPACITY ANALYSIS FOR SIGNALIZED INTERSECTIONS
2004 EXISTING CONDITIONS

	Lane Group		AM			MID			PM			MID SAT		
			V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS
Metropolitan Avenue & Flushing Avenue	EB	DefL	0.87	65.70	E	0.49	22.50	C						
		T	0.36	18.10	B	0.41	18.90	B	0.94	48.60	D	0.80	27.60	C
	WB	DefL				0.49	21.60	C	1.04	124.70	F	0.97	84.10	F
		T	0.90	36.30	D	0.58	22.30	C	0.53	27.90	C	0.59	22.20	C
	NB	L	0.04	14.50	B	0.01	14.00	B	0.01	9.00	A	0.02	14.10	B
		TR	0.60	22.90	C	0.55	21.60	C	0.43	13.20	B	0.46	19.50	B
	SB	L	0.07	14.80	B	0.15	16.00	B	0.12	10.10	B	0.11	15.20	B
Intersection LOS														
			0.55	20.10	C	0.43	18.30	B	0.36	11.70	B	0.30	16.60	B
			28.70	C		20.40	C		32.80	C		27.50	C	
Metropolitan Avenue & Eliot Avenue	EB	DefL	1.03	80.70	F	0.71	23.10	C	0.89	44.10	C	0.92	48.30	D
		TR	0.48	9.80	A	0.43	9.20	A	0.53	10.50	B	0.49	9.80	A
	WB	LTR	0.62	17.80	B	0.41	14.50	B	0.52	15.90	B	0.50	15.60	B
	SB	LTR	0.66	35.10	D	0.48	31.30	C	0.71	36.30	D	0.49	31.40	C
Intersection LOS														
			31.30	C		18.50	B		24.70	C		23.80	C	
Metropolitan Avenue & Forest Avenue	EB	TR	0.52	15.90	B	0.49	15.50	B	0.63	17.70	B	0.48	15.20	B
	WB	DefL	0.73	28.20	C	0.62	22.50	C	0.90	50.70	D	0.72	27.90	C
		T	0.70	13.40	B	0.45	8.90	A	0.45	8.80	A	0.45	8.80	A
	NB	L	0.19	28.80	C	0.16	28.50	C	0.17	28.50	C	0.23	29.30	C
		R	0.98	84.80	F	0.98	83.10	F	0.72	43.90	D	0.83	52.50	D
Intersection LOS														
			25.70	C		25.80	C		24.70	C		21.80	C	
Metropolitan Avenue & Fresh Pond Road	EB	LTR	0.60	25.70	C	0.57	20.90	C	0.89	37.30	D	0.71	23.70	C
	WB	DefL				0.56	23.20	C	0.69	42.80	D	0.75	42.20	D
		TR	1.05	63.90	E	0.63	16.90	B	0.76	24.20	C	0.74	20.20	C
	NB	LTR	1.04	69.50	E	1.02	69.60	E	0.98	56.20	E	0.87	43.90	D
	SB	LTR	0.98	54.50	D	1.05	78.70	E	0.68	25.60	C	0.89	40.50	D
Intersection LOS														
			58.40	E		47.30	D		36.60	D		36.50	D	
Myrtle Ave & Wyckoff Ave & Palmetto Street	EB	LTR	0.73	37.60	D	0.77	31.10	C	0.69	34.70	C	0.87	38.00	D
	WB	LTR	0.56	29.50	C	0.46	19.80	B	0.64	32.60	C	0.45	19.70	B
		Wyckoff												
	NB	DefL				0.85	99.10	F	1.04	154.60	F			
		TR	0.61	49.40	D	0.69	46.80	D	0.70	58.80	E	0.51	35.30	D
	SB	LTR	1.00	111.50	F	1.04	87.90	F	1.04	93.40	D	0.92	64.70	E
		Palmetto												
	NB	LTR	0.47	47.10	D	0.55	41.30	D	0.69	57.40	E	0.67	45.30	D
	SB	L	0.31	45.90	D	0.46	43.80	D	0.56	61.30	E	0.45	44.00	D
		R	0.43	49.80	D	0.34	38.20	D	0.26	43.80	D	0.18	33.00	C
Intersection LOS														
			50.90	D		54.20	D		67.90	E		40.40	D	
Myrtle Avenue & Cypress Avenue	EB	LTR	0.32	10.90	B	0.40	11.80	B	0.49	13.00	B	0.52	13.80	B
	WB	LTR	0.62	15.70	B	0.39	11.70	B	0.46	12.70	B	0.40	11.90	B
	NB	LTR	0.55	28.30	C	0.39	25.70	C	0.55	29.60	C	0.52	27.70	C
	SB	LTR	0.80	44.40	D	0.56	31.10	C	0.77	38.80	D	0.99	75.60	E
Intersection LOS														
			24.10	C		19.20	B		24.00	C		32.40	C	

TABLE 4-2 (Page 2 of 3)
TRAFFIC CAPACITY ANALYSIS FOR SIGNALIZED INTERSECTIONS
2004 EXISTING CONDITIONS

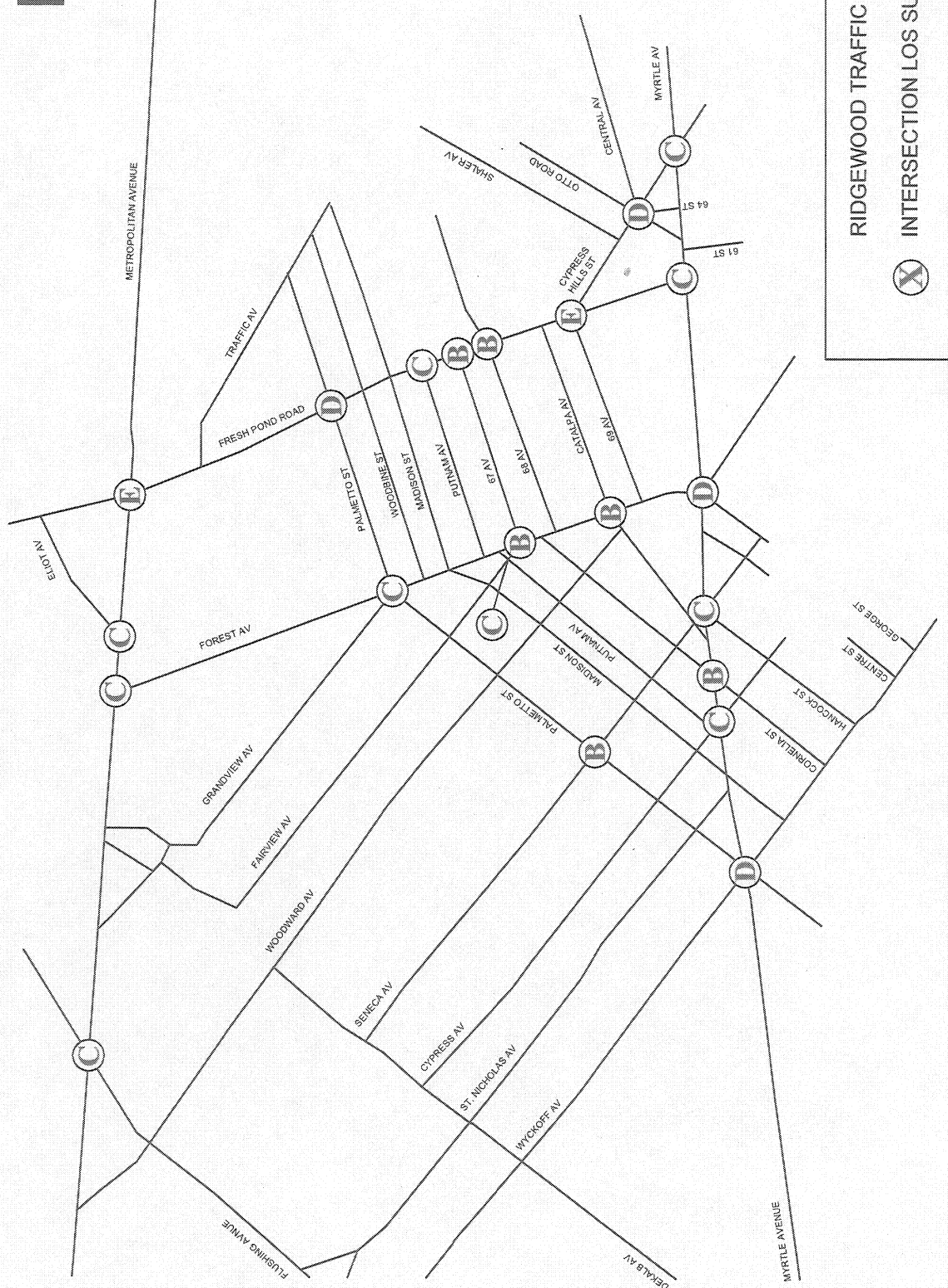
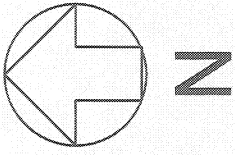
INTERSECTION	Lane Group		AM			MID			PM			MID SAT		
	V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS		
Myrtle Avenue & Cornelia Street	EB	LT	0.33	11.00	B	0.30	10.50	B	0.30	10.50	B	0.32	10.80	B
	WB	TR	0.61	15.40	B	0.39	11.60	B	0.38	11.40	B	0.35	11.00	B
	NB	LTR	0.18	23.00	C	0.16	22.80	C	0.13	22.50	C	0.21	23.40	C
	Intersection LOS			15.40	B	13.30	B	12.90	B	14.10	B			
Myrtle Avenue & Seneca Ave & Hancock Street	EB	LTR	0.36	12.90	B	0.45	14.30	B	0.46	14.30	B	0.49	15.10	B
	WB	LTR	0.55	16.30	B	0.47	14.60	B	0.74	23.30	C	0.59	17.30	C
	NB	LTR	0.57	29.00	C	0.65	31.80	C	0.76	36.90	D	0.58	30.00	C
	SB	LTR	0.64	31.20	C	0.59	29.30	C	0.56	27.70	C	0.59	29.50	C
Intersection LOS			22.00	C	21.80	C	25.40	C	21.60	C				
Myrtle Avenue & Forest Avenue & George Street	EB	LTR	0.79	25.10	C	0.83	27.50	C	0.79	24.30	C	0.95	40.80	D
	WB	LTR	0.98	50.50	D	0.63	18.70	B	0.49	14.90	B	0.63	17.80	B
	NB	LTR	1.04	83.10	F	0.66	32.50	C	0.90	54.30	D	0.65	31.90	C
	SB	LTR	0.87	50.90	D	0.75	37.50	D	1.03	83.70	F	1.00	73.80	E
Intersection LOS			50.30	D	28.00	C	41.70	D	40.20	D				
Myrtle Avenue & Fresh Pond Road	EB	LTR	0.58	15.90	B	0.70	19.40	B	0.64	16.80	B	0.73	20.40	C
	WB	LTR	0.50	12.50	B	0.42	11.40	B	0.21	9.40	A	0.29	10.10	B
	SB	LTR	0.76	34.10	C	0.43	26.20	C	0.32	24.70	C	0.29	24.30	C
	Intersection LOS			21.50	C	17.70	B	16.50	B	17.10	B			
Myrtle Avenue & Cypress Hills Street	EB	LTR	0.34	13.20	B	0.35	13.20	B	0.48	15.20	B	0.47	15.00	B
	WB	LTR	0.89	32.90	C	0.64	18.80	B	0.65	19.20	B	1.04	64.30	E
	SB	LTR	0.63	28.60	C	0.43	24.30	C	0.86	40.80	D	0.74	32.90	C
	Intersection LOS			27.70	C	18.70	B	26.20	C	44.90	D			
Cypress Hills Street & Central Ave (& 64th Street/Otto Road)	EB	LTR	0.22	25.30	C	0.21	25.20	C	0.24	25.50	C	0.33	27.00	C
	WB	LTR	0.91	54.10	D	0.66	34.70	C	0.76	39.40	D	0.17	24.70	C
	NB	LTR	0.40	18.90	B	0.33	18.00	B	0.40	19.20	B	0.41	19.00	B
	SB	LTR	1.00	61.40	E	1.04	72.10	E	1.03	67.40	E	1.04	68.10	E
Intersection LOS			47.50	D	49.50	C	48.40	D	49.90	D				
Fresh Pond Road & Palmetto Street	EB	LTR	0.55	36.70	D	0.16	27.60	C	0.15	27.30	C	0.33	29.80	C
	NB	TR	1.05	56.80	E	0.76	15.70	B	0.61	11.70	B	0.44	9.10	A
	SB	LT	1.02	49.30	D	0.59	11.70	B	0.61	11.60	B	0.50	9.80	A
	Intersection LOS			52.10	D	14.60	B	12.30	B	11.80	B			
Fresh Pond Road & Putnam Avenue	NB	LT	0.79	21.00	C	0.51	14.20	B	0.63	16.20	B	0.71	18.30	B
	SB	TR	0.87	28.70	C	0.76	21.60	C	0.74	20.50	C	0.86	27.30	C
	Intersection LOS			24.40	C	18.00	B	18.20	B	22.80	C			
Fresh Pond Road & 67th Avenue	EB	L	0.36	30.90	C	0.19	28.00	C	0.30	29.10	C	0.34	29.80	C
		R	0.47	35.40	D	0.33	31.50	C	0.28	29.20	C	0.30	29.70	C
	NB	T	0.36	8.40	A	0.26	7.60	A	0.25	7.50	A	0.26	7.50	A
	SB	T	0.29	7.80	A	0.24	7.40	A	0.23	7.30	A	0.25	7.50	A
Intersection LOS			11.60	B	9.80	A	10.80	B	11.10	B				
Fresh Pond Road & 68th Avenue	WB	LTR	0.35	25.60	C	0.21	24.00	C	0.24	24.30	C	0.22	24.10	C
	NB	LTR	0.36	10.30	B	0.24	9.10	A	0.24	9.20	A	0.28	9.50	A
	SB	LTR	0.84	24.70	C	0.63	15.30	B	0.65	16.00	B	0.71	17.80	B
Intersection LOS			19.70	B	14.70	B	15.20	B	15.80	B				

TABLE 4-2 (Page 3 of 3)
TRAFFIC CAPACITY ANALYSIS FOR SIGNALIZED INTERSECTIONS
2004 EXISTING CONDITIONS

INTERSECTION	Lane Group		AM			MID			PM			MID-SAT			
			V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS	
Fresh Pond Road & Cypress Hills Street 69th Avenue	EB	LTR	0.24	25.00	C	0.30	25.60	C	0.34	26.10	C	0.36	26.40	C	
	WB	R	0.98	74.90	E	0.59	36.20	D	0.69	40.80	D	0.77	45.70	D	
	NB	TR	0.27	24.80	C	0.22	24.10	C	0.22	24.20	C	0.51	29.80	C	
	SB	LT	1.03	76.30	E	1.03	83.20	F	1.04	81.90	F	1.03	79.80	E	
Intersection LOS				58.9	E		49.0	D		50.5	D		50.2	D	
Forest Avenue & Palmetto Street & Grandview Avenue	Palmetto														
	EB	LTR	0.72	54.50	D	0.43	37.90	D	0.85	65.9	E	0.36	35.60	D	
	Grandview														
	EB	LTR	0.21	37.30	D	0.20	36.10	D	0.27	37.5	D	0.12	34.40	C	
Intersection LOS	NB	TR	0.52	18.50	B	0.40	16.20	B	0.43	16.7	B	0.44	16.90	B	
	SB	LT	0.74	25.20	C	0.50	17.80	B	0.86	32.3	C	0.62	20.60	C	
				27.10	C		20.10	C		34.4	C		21.10	C	
	Intersection LOS														
Putnam Ave & Fairview Avenue	WB	L	0.04	14.50	B	0.03	14.40	B	0.06	14.70	B	0.03	14.40	B	
		T	0.27	17.10	B	0.12	15.30	B	0.17	15.90	B	0.19	16.10	B	
	SB	TR	0.59	22.30	C	0.24	16.50	B	0.46	19.50	B	0.40	18.60	B	
Intersection LOS				20.60	C		16.10	B		18.30	B		17.70	C	
Forest Avenue & 67th Avenue Fairview Avenue	EB	LTR	0.40	27.00	C	0.24	25.10	C	0.40	27.10	C	0.37	26.70	C	
	NB	TR	0.42	11.50	B	0.33	10.50	B	0.36	10.80	B	0.40	11.20	B	
	SB	LT	0.45	12.40	B	0.45	12.10	B	0.57	20.00	C	0.62	16.20	B	
Intersection LOS				16.80	B		14.60	B		19.60	B		17.70	B	
Forest Avenue & Catalpa Avenue	WB	LTR	0.49	29.70	C	0.30	26.30	C	0.51	29.70	C	0.40	27.70	C	
	NB	LT	0.65	17.00	B	0.39	11.40	B	0.55	14.50	B	0.60	15.40	B	
	SB	TR	0.37	11.00	B	0.42	11.60	B	0.58	14.10	B	0.57	13.90	B	
Intersection LOS				18.40	B		14.40	B		18.00	B		17.10	B	
Seneca Avenue & Palmetto Street	EB	LTR	0.13	14.30	B	0.08	14.00	B	0.18	14.60	B	0.14	14.40	B	
	NB	LTR	0.53	11.60	B	0.35	9.30	A	0.51	11.40	B	0.62	13.80	B	
	SB	LTR	0.26	8.60	A	0.28	8.70	A	0.47	10.90	B	0.33	9.20	A	
Intersection LOS				11.40	B		9.90	A		11.9	B		12.6	B	

approach with LOS D or worse

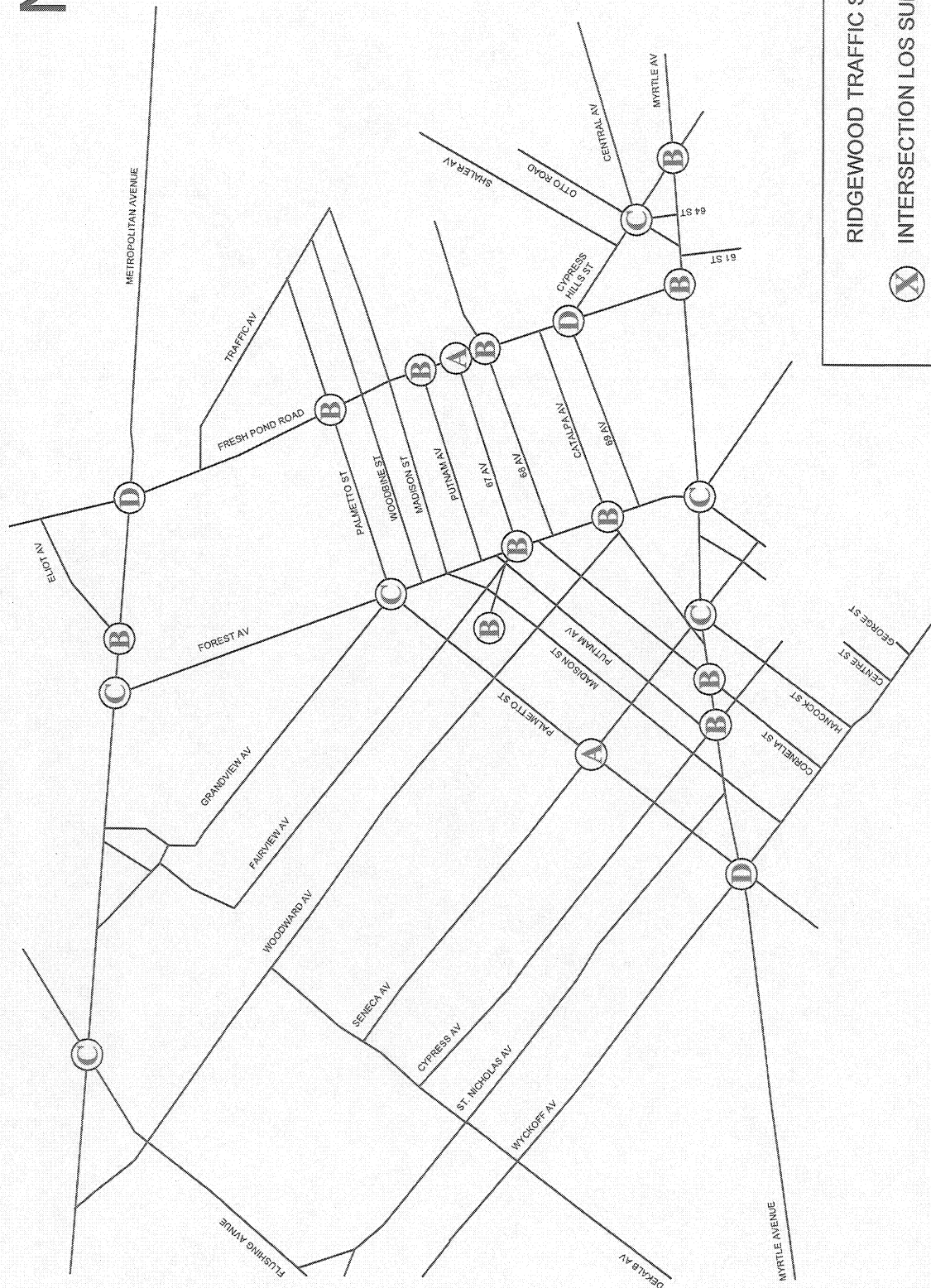
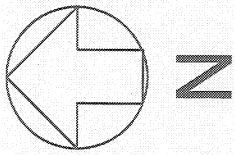
Figure 4-8
Existing Intersection LOS
(AM Peak Hour - 7:45-8:45)



RIDGEWOOD TRAFFIC STUDY
 INTERSECTION LOS SUMMARY



Figure 4-9
 Existing Intersection LOS
 (MD Peak Hour - 11:45-12:45)



RIDGEWOOD TRAFFIC STUDY
 INTERSECTION LOS SUMMARY



Figure 4-10
Existing Intersection LOS
(PM Peak Hour - 5:15-6:15)

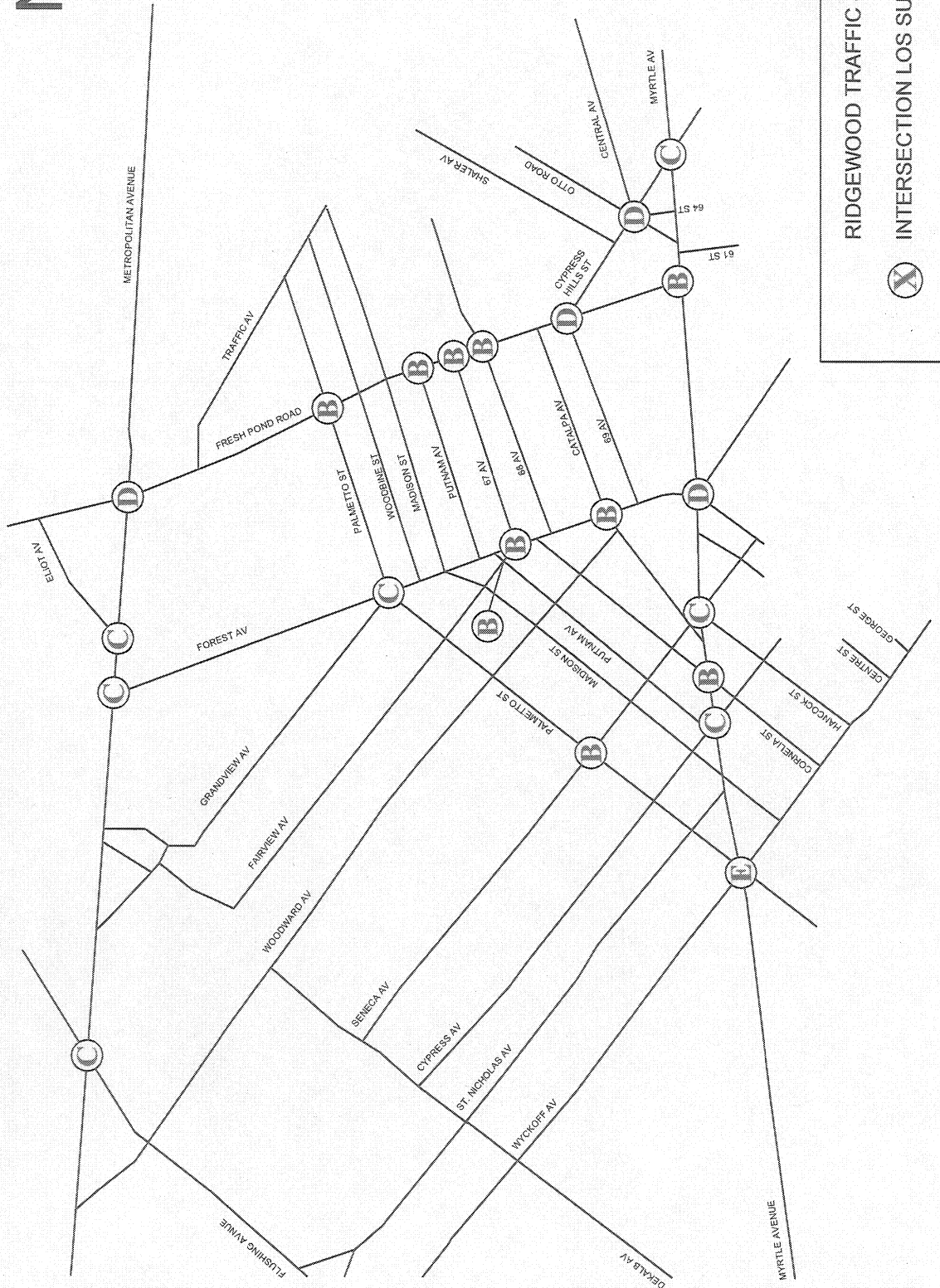
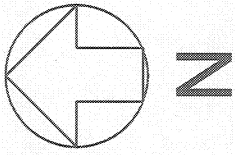


Figure 4-11
Existing Intersection LOS
(Saturday MD Peak Hour - 12:00-1:00)

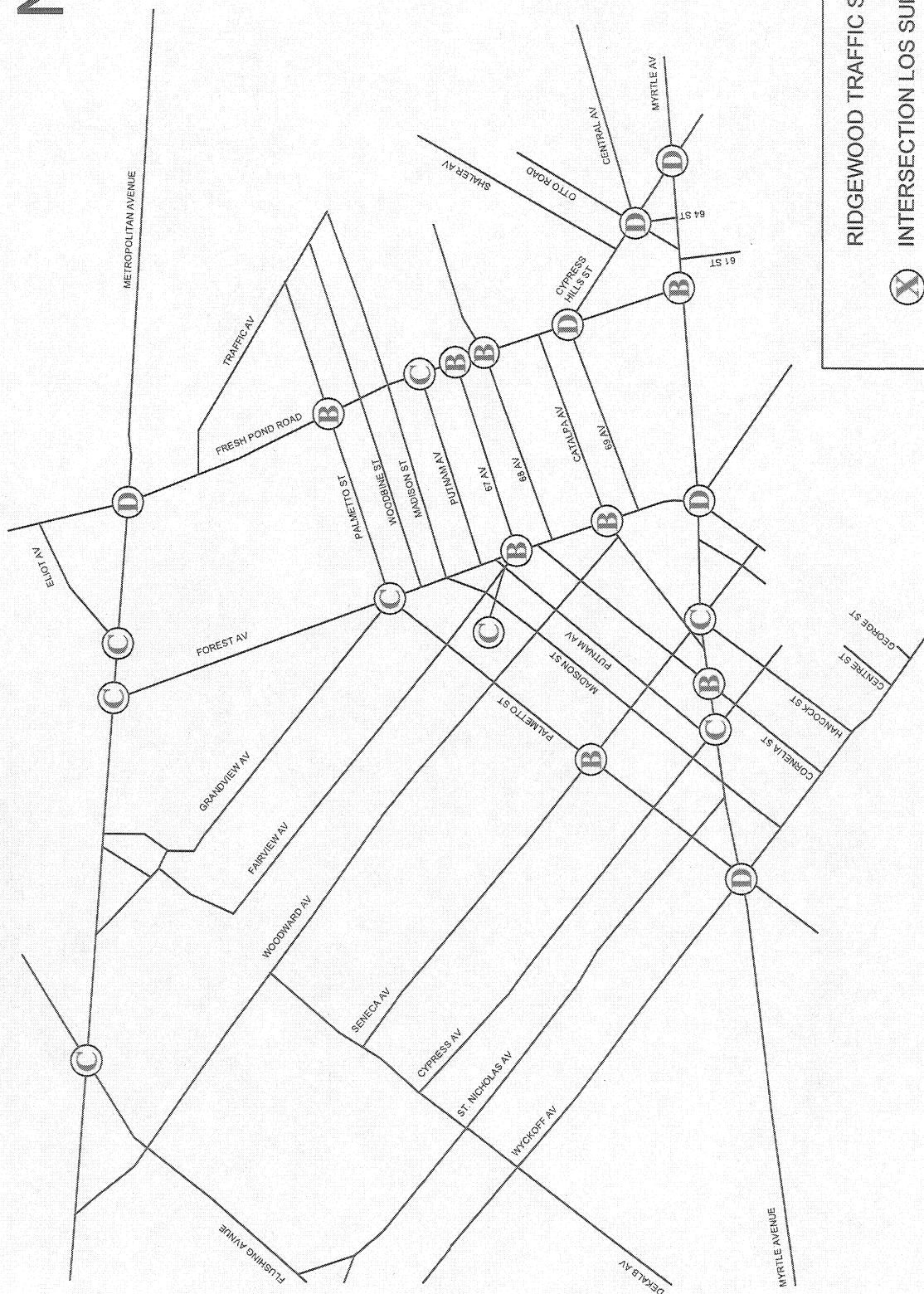
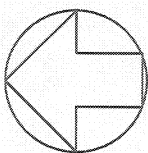


Figure 4-12
 Existing Intersection with LOS D, E, and F
 (AM Peak Hour - 7:45-8:45)

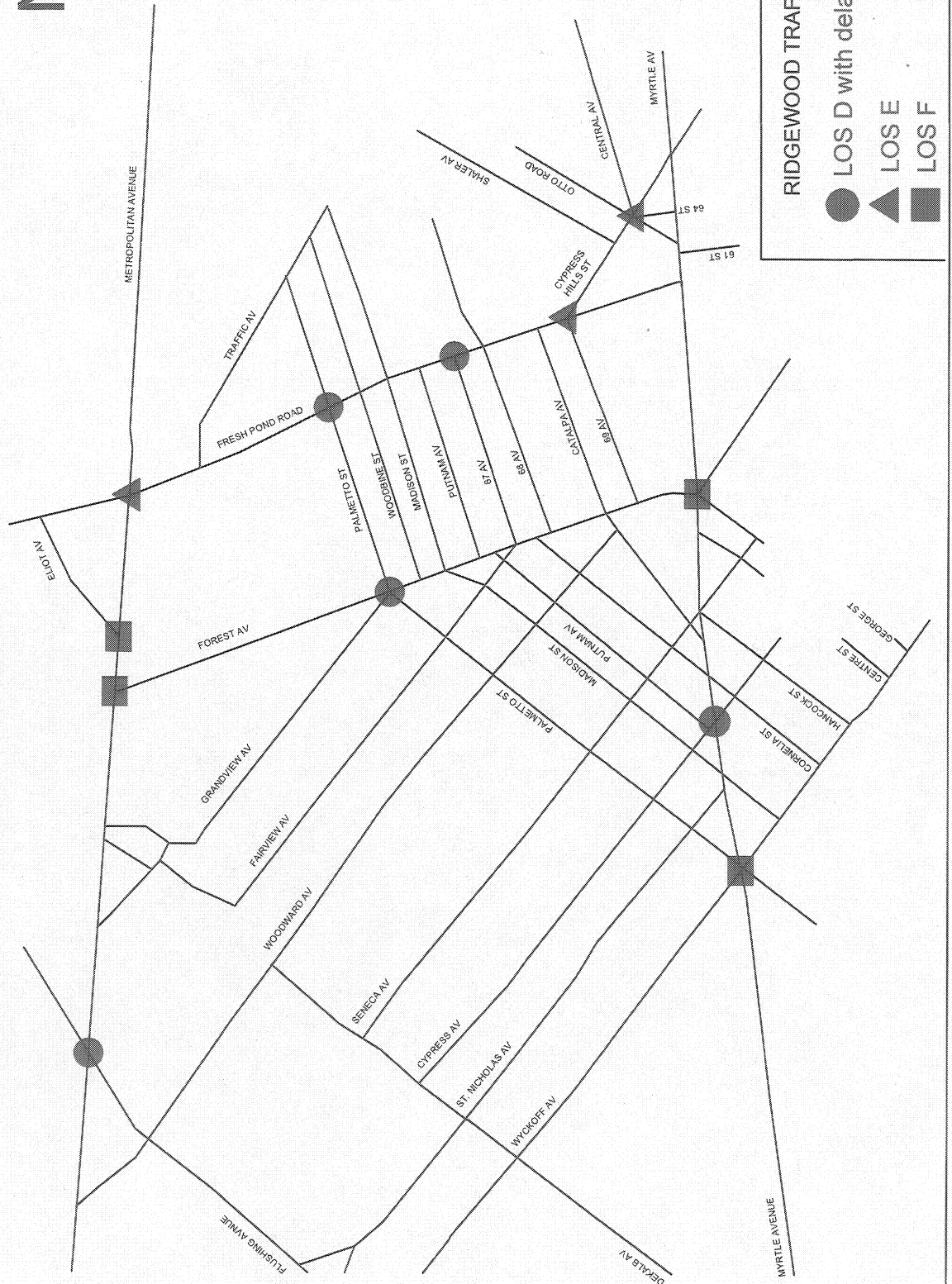
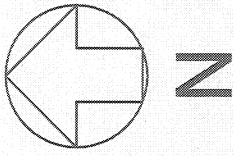
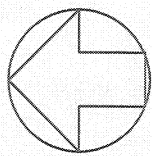


Figure 4-13

Existing Intersection with LOS D, E, and F
 (MD Peak Hour - 11:45-12:45)



N

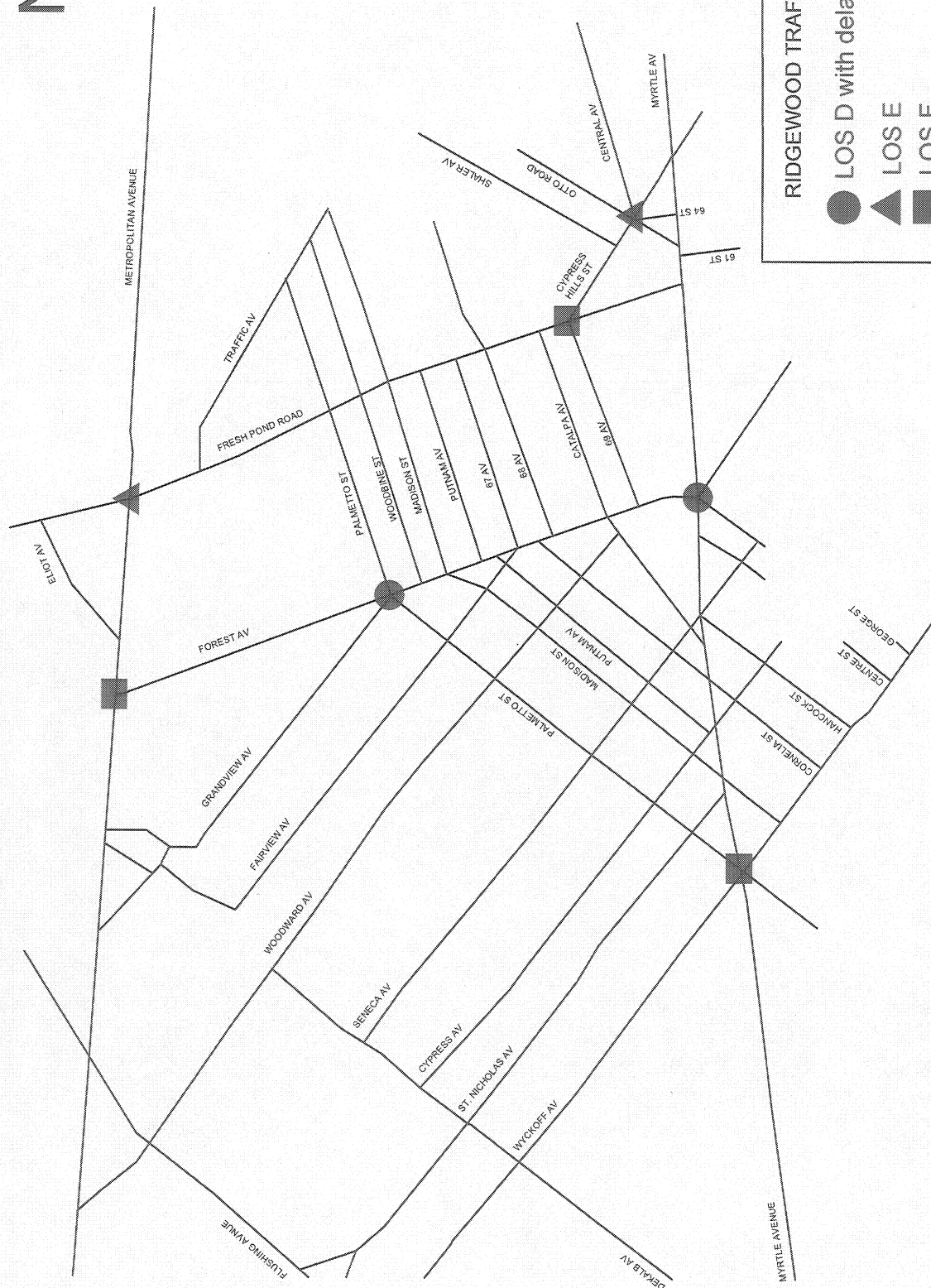


Figure 4-14
 Existing Intersection with LOS D, E, and F
 (PM Peak Hour - 5:15-6:15)

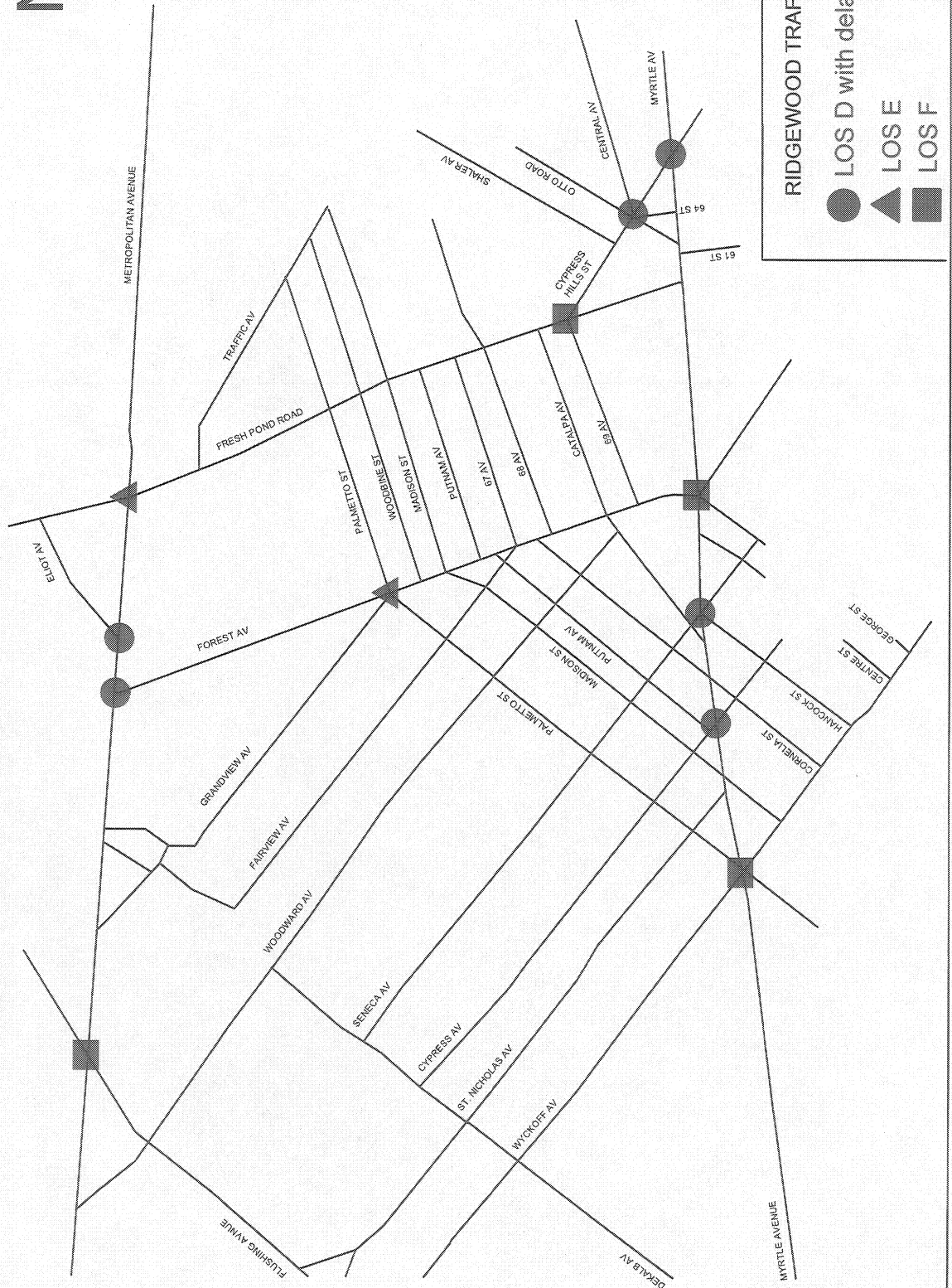
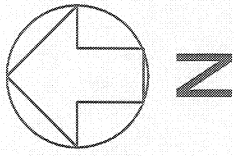
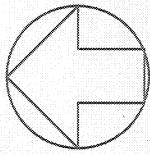


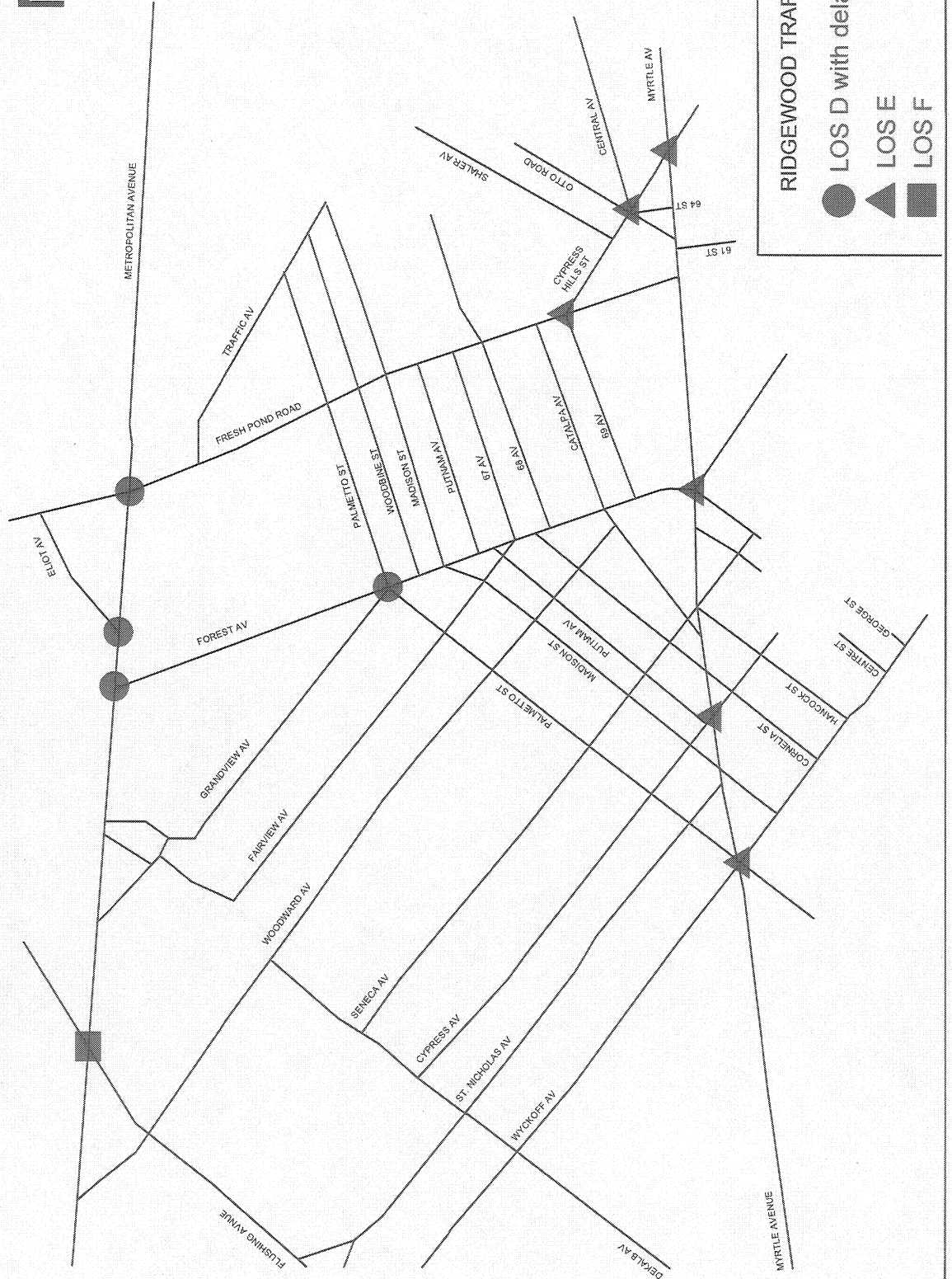
Figure 4-15

Existing Intersection with LOS D, E, and F

(Saturday MD Peak Hour - 12:00-1:00)



N



4.7 Vehicle Speeds

In order to measure peak hour travel time and vehicular speeds in the study area and to identify locations where traffic delay exists, multiple speed runs and travel time data were collected during the weekday in November 2004.

The travel time runs were conducted on the major corridors for each peak period for two consecutive weekdays concurrently with the traffic volume data collection. Three or four runs were performed for each link during each peak travel period.

The “floating car” method (a technique whereby a field vehicle travels at speeds under prevailing traffic conditions) was used to measure travel time and speed on the following four corridors:

1. Myrtle Avenue between Irving Avenue and Cypress Hills Avenue (East and West bounds)
2. Metropolitan Avenue between Flushing Avenue and 65th Street (East and West bounds)
3. Fresh Pond Road between Myrtle Avenue and Metropolitan Avenue (North and South bounds)
4. Forest Avenue between Myrtle Avenue and Metropolitan Avenue (North and South bounds)

Travel speeds throughout the study area for various peak periods range from 6 mph to 18 mph approximately. The corridor with the lowest travel speed is Fresh Pond Road, ranging from 6 mph to 15 mph during the three peak hours. Figure 4-16 shows the speed run corridors and Table 4-3 and 4-4 display a summary of average link and corridor travel speeds.

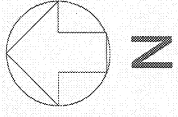
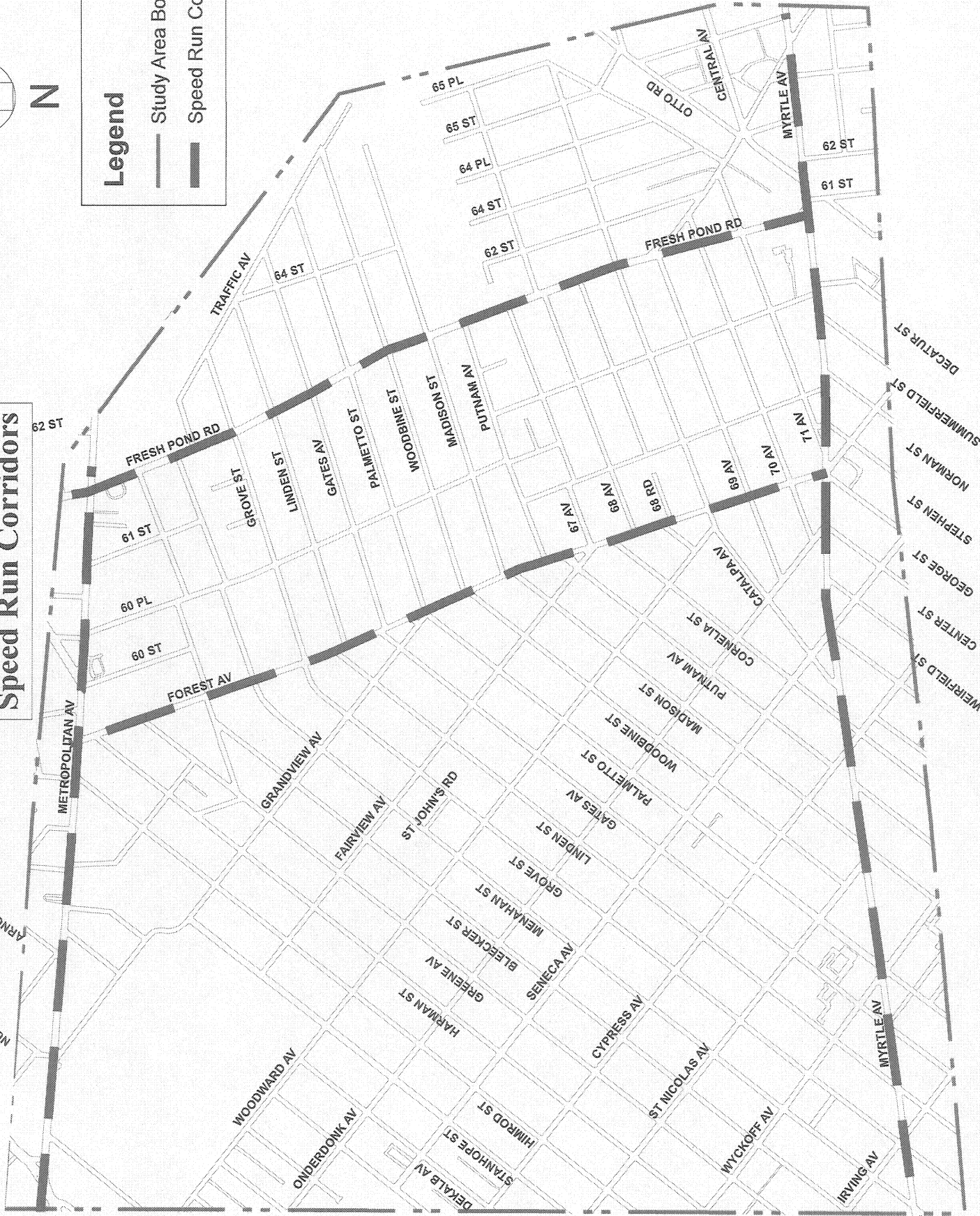


Figure 4-16
Speed Run Corridors

Legend

- Study Area Boundary
- Speed Run Corridors



**Table 4-3
CORRIDOR TRAVEL SPEEDS**

**Myrtle Avenue - Corridor 1
(from Irving Avenue to Cypress Hill Avenue)**

Direction-Eastbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Irving Avenue to Gates Avenue	653	16.5	15.0	15.9
Palmetto Street	420	17.9	23.2	23.9
St. Nicolas	607	18.8	21.8	5.5
Cypress Avenue	715	24.4	14.0	6.1
Cornelia Street	188	25.6	18.7	10.7
Seneca Avenue	541	7.2	15.0	19.4
Centre Street	605	17.2	10.0	4.7
Forest Avenue	371	2.5	7.4	23.0
Stephen Street (71 Ave)	255	17.8	18.7	4.4
Norman Street (60 Pl)	313	18.9	11.6	10.3
Decatur Street	547	53.3	17.2	14.3
Fresh Pond Road	467	31.8	6.7	6.5
Central Avenue	185	18.0	26.3	7.0
62nd Street	115	5.2	17.6	9.8
64th Street	254	3.3	24.7	21.7
64th Place	265	18.1	24.2	22.6
Cypress Hills Avenue	230	12.1	24.4	3.3
Tot Dist & Eastbound Average Travel Speed	6,731	11.4	13.9	8.4

Direction-Westbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Cypress Hill Avenue to 64th Place	230	15.8	21.0	26.1
64th Street	265	19.1	24.1	22.6
62nd Street	254	21.7	23.2	28.9
Central Avenue	115	17.6	22.9	19.6
Fresh Pond Avenue	185	24.8	21.0	31.5
Decatur Street	467	6.3	12.4	29.0
60th Place	625	18.5	14.4	8.5
71st Avenue	345	21.4	23.8	16.8
Forest Avenue	157	7.0	7.7	10.7
Centre Street	371	9.2	21.1	23.0
Seneca Avenue	605	20.4	18.9	7.0
Cornelia Street	541	14.8	7.4	21.7
Cypress Avenue	188	16.0	11.3	18.3
Madison Street	553	6.1	12.1	6.0
Palmetto Street	757	11.2	4.4	7.1
Gates Avenue	420	10.2	6.7	19.1
Irving Avenue	653	12.4	12.5	9.1
Tot Dist & Westbound Average Travel Speed	6,731	11.8	10.6	11.3

Table 4-3 (Cont')
CORRIDOR TRAVEL SPEEDS

Metropolitan Avenue - Corridor 2
(from Flushing Avenue to 65th Street)

Direction-Eastbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Flushing Avenue to Starr Street	316	15.2	11.3	21.6
Grandview Avenue	521	25.5	22.2	20.9
Arnold Avenue	599	19.0	18.6	19.5
Tonsar Street	538	18.1	13.1	28.2
Himrod Street	537	28.3	15.9	30.5
Forest Avenue	245	14.0	3.1	2.9
60th Street	190	16.5	21.6	18.5
Eliot Avenue	153	12.1	9.5	26.1
60th Place	326	24.4	31.8	27.8
61st Street	423	23.6	32.1	17.0
Fresh Pond Road	453	7.0	17.2	18.2
65th Street	1313	26.0	28.9	17.9
Tot Dist & Eastbound Average Travel Speed	5,614	18.1	15.7	16.4

Direction-Westbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
65th Street to Fresh Pond Road	1313	20.8	8.6	8.3
61st Street	453	18.2	25.7	25.7
60th Place	423	24.0	9.0	6.9
Eliot Avenue	326	31.8	27.8	27.8
60th Street	153	20.9	20.9	17.4
Forest Avenue	189	21.5	18.4	16.1
56th Street	253	21.6	28.8	14.4
Andrews Avenue	554	22.2	25.2	8.6
Arnold Avenue	539	27.6	24.0	14.4
Nurge Avenue	633	25.4	27.0	3.8
Starr Street	462	5.7	19.7	6.3
Flushing Avenue	316	10.8	30.8	13.5
Tot Dist & Westbound Average Travel Speed	5,614	17.4	15.7	8.6

Table 4-3 (Cont')
CORRIDOR TRAVEL SPEEDS

Fresh Pond Road - Corridor 3
(from Myrtle Avenue to Metropolitan Avenue)

Direction-Northbound		Speed (MPH)			Direction-Southbound		Speed (MPH)		
Links	Dist. (ft.)	AM	MD	PM	Links	Dist. (ft.)	AM	MD	PM
Myrtle Avenue to 71st Avenue	408	11.3	18.0	27.8	Metropolitan Avenue to Bleecker Street	305	10.9	17.3	5.6
Cypress Hills Street	504	5.5	7.0	5.9	Grove Street	618	20.8	9.0	6.2
Catalpa Avenue	256	17.6	17.5	34.9	Linden Street	268	25.4	21.6	14.1
68th Road	237	25.0	19.6	14.7	Gates Street	254	25.1	22.6	1.0
68th Avenue	269	23.3	25.5	20.4	Palmetto Street	261	21.8	15.5	9.4
67th Avenue	190	18.9	18.9	16.2	Woodbine Street	252	27.3	26.0	10.1
Madison Street	521	14.9	16.4	8.3	Madison Street	247	10.9	9.3	3.8
Woodbine Street	247	22.6	19.1	15.3	67th Avenue	521	11.3	19.8	16.9
Palmetto Street	252	14.5	9.4	21.5	68th Avenue	222	17.9	26.9	10.8
Gates Street	261	19.2	14.5	6.4	68th Road	218	15.8	16.5	18.6
Linden Street	254	22.0	8.2	15.7	Catalpa Avenue	237	21.2	24.2	18.0
Grove Street	268	22.2	16.7	3.8	Cypress Hills Street	256	14.4	19.3	3.8
Bleecker Street	618	7.1	14.6	21.1	71st Avenue	504	14.8	30.4	17.2
Metropolitan Avenue	305	17.3	2.4	26.0	Myrtle Avenue	408	5.1	6.9	5.1
Tot Dist & Northbound Average Travel Speed	4,590	12.1	10.2	11.3	Tot Dist & Southbound Average Travel Speed	4,571	13.5	14.8	5.8

Table 4-3 (Cont')
CORRIDOR TRAVEL SPEEDS

Forest Avenue - Corridor 4
(from Myrtle Avenue to Metropolitan Avenue)

Direction-Northbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Myrtle Avenue to 69th Avenue	476	10.1	8.4	6.8
Catalpa Avenue	264	16.4	18.0	30.0
67th Avenue	746	23.1	20.9	23.1
Putnam Street	289	21.9	13.3	19.7
Madison Street	262	4.0	23.0	2.8
Woodbine Street	260	13.6	11.6	17.7
Palmetto Street	258	2.8	11.2	3.9
Gates Street	263	10.6	14.6	10.6
Grove Street	532	7.3	8.2	7.6
Menahen Street	316	21.6	20.6	21.6
Bleecker Street	302	2.5	19.7	15.8
Greene Street	397	8.7	14.7	20.8
Metropolitan Avenue	410	2.7	3.1	4.7
Tot Dist & Northbound Average Travel Speed	4,775	6.7	10.4	8.9

Direction-Southbound	Speed (MPH)			
	Links	Dist. (ft.)	AM	MD
Metropolitan Avenue to Greene Street	410	16.6	6.3	16.4
Bleecker Street	397	16.3	22.7	15.9
Menahen Street	302	16.6	27.6	22.9
Grove Street	316	11.7	22.7	30.8
Gates Street	532	9.8	22.6	19.1
Palmetto Street	263	18.2	21.0	3.3
Woodbine Street	258	18.6	16.5	10.4
Madison Street	260	19.9	19.9	11.1
Putnam Street	262	26.1	14.6	25.5
67th Avenue	289	14.5	13.1	28.2
Catalpa Avenue	746	12.9	26.1	10.0
69th Avenue	264	9.8	12.9	15.0
Myrtle Avenue	476	8.8	11.1	9.8
Tot Dist & Southbound Average Travel Speed	4,775	13.3	15.7	12.2

**Table 4-4
Corridor Travel Speeds Summary - Existing Condition**

No	Corridors	From	To	Time	Direction	Existing Conditions
						Average Speed (mph)
1	Myrtle Avenue	Irving Avenue	Cypress Hills Avenue	AM	EB	11.4
					WB	11.8
				MD	EB	13.9
					WB	10.6
				PM	EB	8.4
					WB	11.3
2	Metropolitan Avenue	Flushing Avenue	65th Street	AM	EB	18.1
					WB	17.4
				MD	EB	15.7
					WB	15.7
				PM	EB	16.4
					WB	8.6
3	Fresh Pond Road	Myrtle Avenue	Metropolitan Avenue	AM	NB	12.1
					SB	13.5
				MD	NB	10.2
					SB	14.8
				PM	NB	11.3
					SB	5.8
4	Forest Avenue	Myrtle Avenue	Metropolitan Avenue	AM	NB	6.7
					SB	13.3
				MD	NB	10.4
					SB	15.7
				PM	NB	8.9
					SB	12.2

4.8 Goods Movement

The movement of goods and trucks in the study area is influenced by DOT designated truck routes and the concentration of industrial and commercial activities along certain corridors. There are two categories of truck routes. See Figure 4-17:

- a) Through truck routes – routes for use by all trucks and;
- b) Local truck routes – routes for use by trucks with local origins and/or destinations.

The through truck routes in the study area are located at:

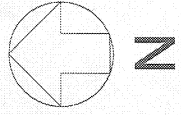
- Flushing Avenue from Metropolitan Avenue to 53rd Street
- Myrtle Avenue from Wyckoff Avenue/Palmetto Street to 65th Street

The local truck routes are located at:

- Metropolitan Avenue between Flushing Avenue and 62nd Street
- Myrtle Avenue between Menahan Street and Wyckoff Avenue/Palmetto Street
- Fresh Pond Road between Metropolitan Avenue and Myrtle Avenue
- Central Avenue between Myrtle Avenue and 65th Place

Metropolitan Avenue though not the busiest with commercial retail experiences a significant amount of truck traffic. This is due to its location as it provides access to the BQE as well as its close proximity to the Maspeth industrial area. The north east section of the study area which is zoned M1-1 has warehouse and many trucks access the area by pass of Traffic Avenue. Many trucks can be seem parked and idling in the area and has been of some concern to the community.

Figure 4-17
Local and Through Truck Routes



Legend

- Study Area Boundary

Truck Routes

- Local Truck Route
- Through Truck Route

